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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,650	11/26/2003	Hinsdale Bernard	BERNP101US	8774

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AMIN, TUROCY & CALVIN, LLP
1900 EAST 9TH STREET, NATIONAL CITY CENTER
24TH FLOOR,
CLEVELAND, OH 44114

EXAMINER

SAADAT, CAMERON

ART UNIT	PAPER NUMBER
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3714

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/07/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/723,650

Applicant(s)

BERNARD, HINSDALE

Examiner

Cameron Saadat

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 4/16/04; 11/26/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement filed 11/26/2003 fails to fully comply with 37 CFR 1.98(a)(2), which requires a legible copy of each non-patent literature publication or that portion which caused it to be listed. Applicant has cited Volume 5, No. 2, of the Journal of Education in Science for Trinidad and Tobago, however, only a copy of the cover page has been provided. It has been placed in the application file, but the information referred to therein has not been considered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 and 5-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Katz (US 4,199,876).

Regarding claim 1, Katz discloses a three dimensional arrangement of chemical elements, comprising: a continuous unidirectional periodic spiral of objects, the spiral having a substantially elliptical shape, and each object representing a different chemical element; the objects positioned so that chemical elements in a Period are in a single spiral loop; and each successive Period has a larger circumference than a preceding Period; and the objects positioned so that chemical elements in a chemical group are in substantially the same vertical plane. See Figs. 3-9

Regarding claim 2, Katz discloses a three dimensional arrangement of chemical elements wherein the objects are cylindrical in shape. See Fig. 3.

Regarding claim 3, Katz discloses a three dimensional arrangement of chemical elements wherein the objects represent chemical elements from H to about Mt. See Fig. 1.

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Regarding claim 5, Katz discloses a three dimensional arrangement of chemical elements wherein the objects have relative physical dimensions that substantially correspond to relative physical dimensions of actual atomic radii of the chemical elements. See Fig 3; Col. 1, lines 6-21.

Regarding claim 6, Katz discloses a three dimensional arrangement of chemical elements wherein the objects are positioned within seven Periods. See Fig. 1.

Regarding claim 7, Katz discloses a three dimensional arrangement of chemical elements wherein the objects are positioned within seven Periods, and the single spiral loop of the sixth Period and the single spiral loop of the seventh Period each comprise a reverse. See Col. 6, lines 10-12.

Regarding claim 8, Katz discloses a three dimensional arrangement of chemical elements wherein the objects are positioned within seven Periods, and the single spiral loop of the sixth Period and the single spiral loop of the seventh Period each comprise two reverses. See Col. 6, lines 10-12.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 4 and 9 rejected under 35 U.S.C. 103(a) as being unpatentable over Katz (US 4,199,876) in view of Alexander (US 3,581,409).

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Regarding claims 4 and 9, Katz discloses all of the claimed subject matter with the exception of explicitly disclosing the feature of providing color-coded objects representing four major groups of elements. However, Alexander teaches a three dimensional periodic table of elements, wherein elements are provided in different colors in order to define groups or families of elements (See Alexander, col. 4, lines 9-12). Thus, in view of Alexander, it would have been obvious to one of ordinary skill in the art to modify the elements described in Katz, by providing coloring, in order to define groups or families of elements.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Katz (US 4,199,876).

Regarding claim 10, Katz discloses a learning kit, comprising: a storable and assemblable three dimensional arrangement of chemical elements comprising a continuous unidirectional periodic spiral of objects, the spiral having a substantially elliptical shape, and each object representing a different chemical element; the objects positioned so that chemical elements in a Period are in a single spiral loop, and each successive Period has a larger circumference than a preceding Period; and the objects positioned so that chemical elements in a chemical group are in substantially the same vertical plane. See Figs. 3-9. Katz discloses all of the claimed subject matter with the exception of explicitly disclosing the feature of providing a carrying case to store the three dimensional arrangement of chemical elements. However, the examiner takes official notice that the feature of providing a carrying case for educational materials is old and well known for providing protection and allowing for transport. Thus, it would have been obvious to one of ordinary skill in the art to modify the periodic table of elements described in Katz, by providing a carrying case in order to provide protection and ease of transport.

Claims 11-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katz (US 4,199,876) in view of Interactive Periodic Table.

3/3/07
claims 11, 12, 15 & 18
Regarding ~~claim 11~~, Katz discloses all of the claimed subject matter with the exception of explicitly disclosing the feature of providing audio information (as per claim 11), illumination (as per

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claim 12) and color-coding (as per claim 15 and 18) for the chemical elements. However, Interactive Periodic Table teaches a periodic table wherein audio, video and color information is provided for the elements in order to provide a wide range of multimedia sources and thereby engaging a student by providing interactive audio and video presentation. See P 1-2. Thus, in view of Interactive Periodic Table, it would have been obvious to one of ordinary skill in the art to modify the table of elements described in Katz, by providing audio and video information, and thereby engaging a student using multimedia information.

Regarding claim 13, Katz discloses all of the claimed subject matter with the exception of explicitly disclosing a chemical group comprising groups 1-18. However, it is the examiner's position that it would have been an obvious matter of design choice as to the number of groupings for grouping elements having similar chemical and physical properties wherein no stated problem is solved or unexpected result is obtained by prescribing groups 1-18.

Regarding claim 14, wherein the objects represent chemical elements from H to about Uuo. See Fig. 1.

Regarding claim 16, wherein the objects have relative physical dimensions that substantially correspond to relative physical dimensions of actual atomic radii of the chemical elements. See Fig 3; Col. 1, lines 6-21.

Regarding claim 17, wherein the objects are positioned within seven Periods. See Fig. 1.

Regarding claim 19, Katz discloses a three dimensional arrangement of chemical elements, comprising: a continuous unidirectional periodic spiral of objects, the spiral having a substantially elliptical shape, and each object representing a different chemical element; the objects positioned so that chemical elements in a Period are in a single spiral loop, and each successive Period has a larger circumference than a preceding Period; and the objects positioned so that chemical elements in a chemical group are in substantially the same vertical plane. See Figs. 3-9.

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Katz discloses all of the claimed subject matter of claims 19 and 20 with the exception of explicitly disclosing that the arrangement of chemical elements is a computerized. However, Interactive Periodic Table teaches a periodic table that is computerized in order to provide a wide range of multimedia sources and thereby engaging a student. See P 1-2. Thus, in view of Interactive Periodic Table, it would have been obvious to one of ordinary skill in the art to modify the table of elements described in Katz, by providing a computerized version, and thereby engaging a student using multimedia information.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

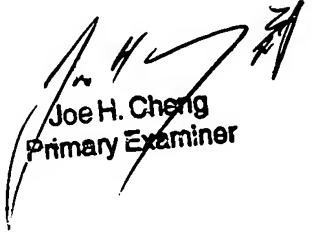
- Possidento (US 2002/0072045) – discloses a 3d periodic table of elements.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cameron Saadat whose telephone number is (571) 272-4443. The examiner can normally be reached on M-F 9:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert E. Pezzuto can be reached on (571) 272-6996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Cameron Saadat
March 5, 2007


Joe H. Cheng
Primary Examiner